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June 24, 2003

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARYMarlene H. Dortch, Esquire
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554Re: **Written Ex Parte Presentation in**
ET Docket No. 02-305; RM-10331

Dear Ms. Dortch:

Space Imaging LLC, licensee of a U.S. commercial remote sensing satellite system, hereby urges the Commission to allocate the 25.5-27.0 GHz frequency band *on a primary basis* to the Earth Exploration Satellite Service ("EESS") (space-to-Earth) in the Non-Federal Government Table of Frequency Allocations.

Space Imaging has operated the IKONOS remote sensing satellite since 1999 and currently provides a variety of imagery and data products and value-added services for commercial and governmental applications. The company provides products and services used in various industry sectors, including agriculture, transportation, forestry, oil and gas, mining, environmental, telecommunications and real estate, and it also serves Federal, state and local governments in connection with defense and intelligence programs, planning and tax assessment, and other projects. Space Imaging operates three ground stations in the United States, and regional affiliates operate eleven other ground stations for accessing data in other parts of the world. The Space Imaging system currently uses X-band spectrum to downlink data in the 8025-8400 MHz band, the same frequency band currently used or proposed by the other U.S. commercial remote sensing satellite systems.

Background

The *Notice of Proposed Rulemaking* in the above-referenced proceeding proposes to amend Parts 2, 25 and 87 of the Commission's rules in order to implement domestically various allocation decisions from several World Radiocommunication Conferences ("WRCs") in frequency bands between 28 MHz and 36 GHz.¹ Certain proposals in the *NPRM* relate to EESS

¹ *Amendment of Parts 2, 25, and 87 of the Commission's Rules to Implement Decisions From World Radiocommunication Conferences Concerning Frequency Bands Between 28 MHz and 36 GHz and to Otherwise Update the Rules in this Frequency Range; Amendment of Parts 2 and 25 of the Commission's Rules to Allocate*

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allocations in the band 25.25-27.5 GHz, including a proposal to upgrade the EESS (space-to-Earth) allocation in the sub-band 22.5-27.0 GHz to primary status in the Federal Government Table. Notably, however, the *NPRM* fails to propose an equivalent upgrade from secondary to primary status for the EESS allocation in the *Non-Government* Table.

The Commission apparently formulated its EESS proposals in the *NPRM* based solely on the spectrum needs of Government systems, as reported by the National Telecommunications and Information Administration ("NTIA"). The proposals therefore do not reflect the future spectrum needs of the commercial remote sensing satellite industry. For reasons set forth below, Space Imaging respectfully urges the Commission to change the *Non-Government* EESS allocation at 25.5-27.0 GHz to primary status in order to support the future spectrum requirements of the commercial remote sensing satellite industry. By taking this important step, the FCC also would align this spectrum allocation decision with critical U.S. policy objectives recently announced in the *U.S. Commercial Remote Sensing Policy*.

Discussion

A primary EESS (space-to-Earth) allocation in the 25.5-27.0 GHz band will be needed by the commercial remote sensing industry in the relatively near future. While X-band frequencies at 8025-8400 MHz have been able to accommodate the needs of the remote sensing industry to date, second or third generation satellites will require additional spectrum resources in order to downlink increasing amounts of data at faster rates. Thus, the demand for higher resolution imagery and advances in sensing technology will necessitate wider bandwidths to enable commercial remote sensing systems to downlink their data. DigitalGlobe, Inc., for example, another commercial remote sensing operator, recently informed the FCC that spectrum requirements for its next generation system cannot be met at X-band and, for this reason, DigitalGlobe anticipates applying to the Commission to use the 25.5-27.0 GHz band.²

The Commission acknowledges that EESS bandwidth requirements are changing, as noted in the *NPRM*:

At WRC-97, the United States proposed to upgrade the secondary EESS (space-to-Earth) allocation in the band 25.5-27 GHz to primary status, stating that these downlinks of EESS data to Earth needed to be on a protected basis. The United States stated that *advanced technology EESS spacecraft will require wider bandwidths to downlink their data* and that the band 25.5-27 GHz is suitable for this purpose. WRC-97 upgraded the EESS (space-to-Earth) allocation as requested....³

Spectrum for Government and Non-Government Use in the Radionavigation-Satellite Service, Notice of Proposed Rulemaking, ET Docket No. 02-305, RM-10331, released October 7, 2002 (hereinafter "*NPRM*").

² See Comments of DigitalGlobe, Inc., dated May 15, 2003, filed in ET Docket 02-305 in response to the *NPRM*.

³ *NPRM* at ¶ 91 (footnotes omitted) (emphasis added).

The Commission also notes in the *NPRM* that “[t]he United States stated that the band 8025-8400 MHz, which is currently used for this purpose, is becoming heavily used by the allocated space services in that band.”⁴ The *NPRM* further observes that:

Advances in technology are providing higher resolution instruments, which in turn *require even larger bandwidths to download their data from the spacecraft*. Present data rates are in the 75-150 Mbps range (requiring up to 300 megahertz of bandwidth) in the band 8025-8400 MHz. Bandwidths as high as 400-800 megahertz are forecast for some EESS sensors and cannot be accommodated in the current band.⁵

Primary EESS spectrum will be needed not only by Government remote sensing satellite systems, but also by the commercial remote sensing systems as well. For this reason, the Commission should upgrade to primary status the EESS (space-to-Earth) allocation at 25.5-27.0 GHz in *both* the Federal Government and Non-Federal Government Tables.

The newly-announced *U.S. Commercial Remote Sensing Policy* (the “*U.S. Policy*”), which was issued by the White House on April 25, 2003, provides further support for an EESS allocation decision that will accommodate the future needs of the commercial remote sensing industry.⁶ The fundamental goal of the *U.S. Policy* is “to advance and protect U.S. national security and foreign policy interests by maintaining the nation’s leadership in remote sensing space activities, and by sustaining and enhancing the U.S. remote sensing industry.”⁷ In support of this goal, the U.S. Government will:

- Rely to the maximum practical extent on U.S. commercial remote sensing space capabilities for filling imagery and geospatial needs for military, intelligence, foreign policy, homeland security, and civil uses;
-
- Develop a long-term, sustainable relationship between the United States Government and the U.S. commercial remote sensing space industry;
- Provide a timely and responsive regulatory environment for licensing the operations and exports of commercial remote sensing space systems; and
- Enable U.S. industry to compete successfully as a provider of remote sensing space capabilities for foreign governments and foreign commercial users....⁸

⁴ *NPRM* at ¶ 91, n.128.

⁵ *NPRM* at ¶ 91, n.129 (emphasis added).

⁶ A copy of the new U.S. Policy is attached to this letter.

⁷ *U.S. Policy* at § II.

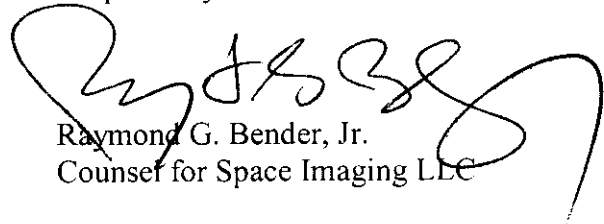
⁸ *Id.*

This *U.S. Policy* reflects the vital role the commercial remote sensing industry plays in achieving U.S. Government objectives, but this role is not a new one. Indeed, Government agencies increasingly have relied on commercial satellite imagery in the past to accomplish critical missions. For example, in June of 2002, the Director of the Central Intelligence Agency, George J. Tenet, issued a Memorandum stating that it is the policy of the Intelligence Community to use US commercial space imagery "to the greatest extent possible," and he directed that U.S. commercial satellite imagery be the primary source of data used for Government mapping.⁹ He also directed the National Imagery and Mapping Agency ("NIMA") to "facilitate acquisition of commercial imagery for other federal agencies." Recently, in January 2003, NIMA awarded substantial multi-year contracts (known as "Clearview") to Space Imaging and DigitalGlobe for the acquisition of high-resolution satellite imagery.

The new *U.S. Policy* solidifies the close relationship between the U.S. Government and the commercial remote sensing industry, and it reflects the increasing reliance the Government intends to place on commercial remote sensing satellite systems. As this partnership moves forward, the commercial operators must have access to sufficient primary EESS spectrum to meet the requirements of future generation remote sensing satellites.

For these reasons, Space Imaging supports an EESS (space-to-Earth) allocation at 25.5-27.0 GHz *on a primary basis* for the commercial remote sensing satellite industry. We urge the Commission to amend the Non-Government Table of Frequency Allocations accordingly.

Respectfully submitted,



Raymond G. Bender, Jr.
Counsel for Space Imaging LLC

cc: Hon. Nancy Victory
Mr. Gil Klinger
Mr. Rodney Small
Mr. Thomas Derenge
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Mr. Robert Nelson
Ms. Diane Garfield
Mr. Bretton S.F. Alexander
Mr. Gregory Hilgenberg

⁹ A copy of the Director's Memorandum is attached to this letter.

U.S. COMMERCIAL REMOTE SENSING POLICY

April 25, 2003

FACT SHEET

The President authorized a new national policy on April 25, 2003 that establishes guidance and implementation actions for commercial remote sensing space capabilities. This policy supersedes Presidential Decision Directive 23, U.S. Policy on Foreign Access to Remote Sensing Space Capabilities, dated 9 March 1994. This fact sheet provides a summary of the new policy.

I. Scope and Definitions

This policy provides guidance for: (1) the licensing and operation of U.S. commercial remote sensing space systems; (2) United States Government use of commercial remote sensing space capabilities; (3) foreign access to U.S. commercial remote sensing space capabilities; and (4) government-to-government intelligence, defense, and foreign policy relationships involving U.S. commercial remote sensing space capabilities.

For the purposes of this document:

- "Remote sensing space capabilities" refers to all remote sensing space systems, technology, components, products, data, services, and related information. In this context, "space system" consists of the spacecraft, the mission package(s), ground stations, data links, and associated command and control facilities and may include data processing and exploitation hardware and software; and
- "Commercial remote sensing space capabilities" refers to privately owned and operated space systems licensed under the Land Remote Sensing Policy Act of 1992, their technology, components, products, data, services, and related information, as well as foreign systems whose products and services are sold commercially.

No legal rights or remedies, or legally enforceable causes of action are created or intended to be created by this policy. Officers of the United States and those agents acting on their behalf implementing this policy shall do so in a manner consistent with applicable law.

II. Policy Goal

The fundamental goal of this policy is to advance and protect U.S. national security and foreign policy interests by maintaining the nation's leadership in remote sensing space activities, and by sustaining and enhancing the U.S. remote sensing industry. Doing so will also foster economic growth, contribute to environmental stewardship, and enable scientific and technological excellence.

In support of this goal, the United States Government will:

- Rely to the maximum practical extent on U.S. commercial remote sensing space capabilities for filling imagery and geospatial needs for military, intelligence, foreign policy, homeland security, and civil users;
- Focus United States Government remote sensing space systems on meeting needs that can not be effectively, affordably, and reliably satisfied by commercial providers because of economic factors, civil mission needs, national security concerns, or foreign policy concerns;
- Develop a long-term, sustainable relationship between the United States Government and the U.S. commercial remote sensing space industry;
- Provide a timely and responsive regulatory environment for licensing the operations and exports of commercial remote sensing space systems; and
- Enable U.S. industry to compete successfully as a provider of remote sensing space capabilities for foreign governments and foreign commercial users, while ensuring appropriate measures are implemented to protect national security and foreign policy.

III. Background

Vital national security, foreign policy, economic, and civil interests depend on the United States ability to remotely sense Earth from space. Toward these ends, the United States

Government develops and operates highly capable remote sensing space systems for national security purposes, to satisfy civil mission needs, and to provide important public services. United States national security systems are valuable assets because of their high quality data collection, timeliness, volume, and coverage that provide a near real-time capability for regularly monitoring events around the world. United States civil remote sensing systems enable such activities as research on local, regional, and global change, and support services and data products for weather, climate, and hazard response, and agricultural, transportation, and infrastructure planning.

A robust U.S. commercial remote sensing space industry can augment and potentially replace some United States Government capabilities and can contribute to U.S. military, intelligence, foreign policy, homeland security, and civil objectives, as well as U.S. economic competitiveness. Continued development and advancement of U.S. commercial remote sensing space capabilities also is essential to sustaining the nation's advantage in collecting information from space. Creating a robust U.S. commercial remote sensing industry requires enhancing the international competitiveness of the industry.

IV. Licensing and Operation Guidelines for Private Remote Sensing Space Systems

The Secretary of Commerce, through the National Oceanic and Atmospheric Administration (NOAA), licenses and regulates the U.S. commercial remote sensing space industry, pursuant to the Land Remote Sensing Policy Act of 1992, as amended, and other applicable legal authorities. The Secretary of Defense and the Secretary of State are responsible for determining the conditions necessary to protect national security and foreign policy concerns, respectively. NOAA, in coordination with other affected agencies and in consultation, as appropriate, with industry, will develop, publish, and periodically review the licensing regulations and associated timelines governing U.S. commercial remote sensing space systems.

To support the goals of this policy, U.S. companies are encouraged to build and operate commercial remote sensing space systems whose operational capabilities, products, and services are superior to any current or planned foreign commercial systems. However, because of the potential value of its products to an adversary, the operation of a U.S. commercial remote sensing space system requires appropriate security measures to address U.S. national security and foreign policy concerns. In such cases, the United States Government may

restrict operations of the commercial systems in order to limit collection and/or dissemination of certain data and products, e.g., best resolution, most timely delivery, to the United States Government, or United States Government approved recipients.

On a case-by-case basis, the United States Government may require additional controls and safeguards for U.S. commercial remote sensing space systems potentially including them as conditions for United States Government use of those capabilities. These controls and safeguards shall include, but not be limited to: (1) the unique conditions associated with United States Government use of commercial remote sensing space systems; and (2) satellite, ground station, and communications link protection measures to allow the United States Government to rely on these systems. The United States Government also may condition the operation of U.S. commercial remote sensing space systems to ensure appropriate measures are implemented to protect U.S. national security and foreign policy interests.

V. United States Government Use of Commercial Remote Sensing Space Capabilities

To support the goals of this policy, the United States Government shall utilize U.S. commercial remote sensing space capabilities to meet imagery and geospatial needs. Foreign commercial remote sensing space capabilities, including but not limited to imagery and geospatial products and services, may be integrated in United States Government imagery and geospatial architectures, consistent with national security and foreign policy objectives.

With regard to the national security remote sensing space architecture, the Secretary of Defense and the Director of Central Intelligence, in consultation with industry as appropriate, shall:

- Determine which needs for imagery and geospatial products and services can be reliably met by Commercial remote sensing space capabilities;
- Communicate current and projected needs to the commercial remote sensing space industry;
- Competitively outsource functions to enable the United States Government to rely to the maximum practical extent on commercial remote sensing space capabilities for filling imagery and geospatial needs;

- Establish the National Imagery and Mapping Agency (NIMA) as the agency of primary responsibility for acquiring and disseminating commercial remote sensing space products and services for: (1) all national security requirements; and, (2) in consultation with the Secretary of State, all foreign policy requirements.

With regard to civil remote sensing space capabilities, the Secretaries of Commerce and the Interior and the Administrator of the National Aeronautics and Space Administration (NASA), in consultation with other United States Government agencies, and with industry, as appropriate, shall:

- Determine which civil needs can be met by commercial remote sensing space capabilities; and
- Communicate current and projected needs to the commercial remote sensing space industry.

United States Government civil agencies acting individually, or when beneficial, together, shall:

- Competitively outsource functions to enable the United States Government to rely to the maximum practical extent on commercial remote sensing space capabilities for filling civil imagery and geospatial needs;
- Acquire and operate United States Government systems that collect data only when such data (1) are not offered and will not be made available by U.S. commercial remote sensing space systems; or (2) require collection, production, and/or dissemination by the United States Government due to unique scientific or technological considerations or other mission requirements; and
- Coordinate with NIMA procurement of all U.S. commercial remote sensing data and products that are restricted to United States Government or United States Government-approved users pursuant to NOAA license conditions due to U.S. national security or foreign policy concerns.

Agencies shall allocate the resources required to implement these objectives within the overall policy and resource guidance of the President and available appropriations. Civil agencies may acquire commercial remote sensing space products and services directly, through cooperative arrangements with other civil agencies, or through NIMA. When procuring through another

agency, civil agencies will reimburse the procuring agency, consistent with the Economy Act.

VI. Foreign Access To U.S. Commercial Remote Sensing Space Capabilities

It is in U.S. national security, foreign policy, and economic interests that U.S. industry compete successfully as providers of remote sensing space products and capabilities to foreign governments and foreign commercial users. Therefore, license applications for U.S. commercial remote sensing space exports shall be considered favorably to the extent permitted by existing law, regulations and policy when such exports support these interests.

The United States Government will consider remote sensing exports on a case-by-case basis. These exports will continue to be licensed pursuant to the United States Munitions List or the Commerce Control List, as appropriate, and in accordance with existing law and regulations. The following guidance will also apply, when considering license applications for remote sensing exports:

- The United States Government will take into account exports' potential contribution to achieving the goals of this policy, the overall relationship, particularly the existing defense and defense trade relationship with the proposed recipient nation, and broader U.S. national security, foreign policy, and economic objectives;
- As a general guideline, remote sensing exports that are currently available or are planned to be available in the global marketplace also will be considered favorably;
- Exports of sensitive or advanced information, systems, technologies, and components, however, will be approved only rarely, on a case-by-case basis. These items include systems engineering and systems integration capabilities and techniques, or enabling components or technologies, i.e., items with capabilities significantly better than those achievable by current or near-term foreign systems. The Secretary of State, in consultation with the Secretary of Defense and the Director of Central Intelligence, shall maintain a Sensitive Technology List that includes these items. This list shall be made available to U.S. industry, consistent with national security and foreign policy

concerns. The Department of State shall use the list in the evaluation of requests for exports; and

- Sensitive or advanced remote sensing exports, including but not limited to a sub-set of items specifically identified on the Sensitive Technology List, will be approved only on the basis of a government-to-government agreement or other acceptable arrangement that includes, among other things, end-use and retransfer assurances that protect U.S. controlled technical data, and broader national security and foreign policy needs. Such agreements also may include protections for intellectual property and economic interests. To facilitate timely implementation, the disposition of export license applications will be expedited after completion of such agreements or arrangements.

VII. Government-to-Government Intelligence, Defense, and Foreign Relationships

The United States Government will use U.S. commercial remote sensing space capabilities to the maximum extent practicable to foster foreign partnerships and cooperation, and foreign policy objectives, consistent with the goals of this policy and with broader national security objectives. Proposals for new partnerships regarding remote sensing that would raise questions about United States Government competition with the private sector shall be submitted for interagency review. In general, the United States Government should not pursue such partnerships if they would compete with the private sector, unless there is a compelling national security or foreign policy reason for doing so.

VIII. Implementation Actions

Implementation of this directive will be within the overall policy and resource guidance of the President and subject to the availability of appropriations. Agencies have been directed to complete a series of specific implementation actions within 120 days from the date of this directive.

Director of Central Intelligence
Washington, DC 20505

7 June 2002

MEMORANDUM FOR: Director, National Imagery and Mapping Agency
SUBJECT: Expanded Use of US Commercial Space Imagery

It is the policy of the Intelligence Community to use US commercial space imagery to the greatest extent possible. Therefore, I request that you take the following actions:

- Direct that US commercial satellite imagery be the primary source of data used for government mapping, regardless of whether the production work is performed by NIMA or is outsourced; national technical means (NTM) will only be tasked under exceptional circumstances as determined by the Director of NIMA. You should review your determinations to use NTM for mapping with the Assistant Director of Central Intelligence for Collection on at least an annual basis.
- Position NIMA to facilitate the acquisition of commercial imagery for other federal agencies that request such support on a reimbursable basis in order to encourage and streamline the acquisition of such data and products in an effort to expand the market for the imagery.
- Seek the concurrence of the Secretary of Defense and myself should you need to reprogram funds appropriated for commercial imagery or reallocate funds budgeted for the purchase of commercial imagery in the President's budget.
- Finally, I request that you take the lead for the Intelligence Community in communicating this policy to the US commercial imagery industry in order to ensure them of our commitment.

My goal in establishing this policy is to stimulate, as quickly as possible, and maintain, for the foreseeable future, a robust US commercial space imagery industry. You have been a champion of commercial imagery for the Community and I encourage your efforts to continue. You should take all possible steps to remove any remaining institutional obstacles to its use in meeting government needs. If you need additional resources to implement this policy, please include your requirements in your FY 2004 NIMA request. I appreciate your leadership in this area and I am committed to supporting you in this endeavor.


George J. Tenet